

EUROPEAN  
CURRICULUM VITAE  
FORMAT



PERSONAL INFORMATION

Name

**EUSTATHIOS S. KIKKINIDES**

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**DEPARTMENT OF CHEMICAL ENGINEERING, SCHOOL OF ENGINEERING,  
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WORK EXPERIENCE

- Dates (from – to)
- Name and address of employer
  - Type of business or sector
  - Occupation or position held
- Main activities and responsibilities

10/2015–present

Department of Chemical Engineering, Aristotle University of Thessaloniki,  
University

Professor

**Teaching activities:**

Teaching of undergraduate and graduate courses

Supervision of Ph.D. dissertations

Supervision of diploma theses

**Research activities on the following subjects:**

Gas and liquid separations and purifications using porous materials (adsorbents, membranes).

Carbon capture and sequestration.

Correlation of pore structural characteristics with transport and equilibrium properties of fluids in porous materials.

Multi-scale modeling and simulation of physicochemical processes.

Interfacial phenomena and multiphase flows.

Microscopic and macroscopic simulation of physicochemical processes in porous media, including single and two phase flow, molecular diffusion, conduction and adsorption.

**Administrative activities**

Director of Unit Operations and Applied Thermodynamics Sector, (12/2017-12/2019).

Participation at different Department/University committees.

- Dates (from – to)
- Name and address of employer
  - Type of business or sector
  - Occupation or position held
- Main activities and responsibilities

6/2004–10/2015

Department of Mechanical Engineering, University of Western Macedonia, Bakola & Sialvera Str., 50100 Kozani, Greece.

University

Professor

**Teaching activities:**

Teaching of undergraduate and graduate courses

Supervision of Ph.D. dissertations (46 completed)

Supervision of diploma theses (25 completed)

**Research activities on the following subjects:**

Environmental technologies with emphasis on energy applications

Hydrogen storage and/or recovery using porous materials or metal hydrides

Theoretical simulations and experimental studies of gas and liquid separations using porous materials and/or membranes

Enhanced oil recovery-reservoir characterization

Natural gas upgrade

Microscopic and macroscopic simulation of physicochemical processes in porous media including single and two phase flow, molecular diffusion, conduction and adsorption.

#### **Administrative activities**

Head of Department (1/9/2010-31/12/2012)

Member of the Governing Board (2011-2015)

Participation at different University committees, member of the temporal board of faculty members at the department of informatics and telecommunications of the University of Western Macedonia.

- Dates (from – to) 5/2000 – 6/2004
- Name and address of employer CPERI/CERTH, PO Box 361, 6<sup>th</sup> km Charilaou-Thermi Rd., 57001 Thermi-Thessaloniki, Greece
  - Type of business or sector National Research Center
  - Occupation or position held Researcher Grade C (2000-2004) Collaborating Faculty Member(2004-present)
- Main activities and responsibilities Preparation and participation in national and international research projects  
Supervision of PhD students  
Research activities on the following subjects:  
Gas separations using ceramic porous membranes  
Enhanced oil recovery-reservoir characterization  
Natural gas upgrade  
Microscopic and macroscopic simulation of physicochemical processes in porous media  
Modeling of chemical reactors
  
- Dates (from – to) 1/1996-4/2000
- Name and address of employer NCSR “Demokritos”, 15310 Ag. Paraskevi Attikis, Athens, Greece
  - Type of business or sector National Research Center
  - Occupation or position held Post doctoral fellow (1996-1997), Research associate (1997-2000)
- Main activities and responsibilities Preparation and participation in national and international research projects  
Supervision of PhD students  
Research activities on the following subjects:  
Gas separations using ceramic porous membranes  
Enhanced oil recovery-reservoir characterization  
Natural gas upgrade  
Microscopic and macroscopic simulation of physicochemical processes in porous media  
Controlled release of drugs or other bio-active substances
  
- Dates (from – to) 1/1996- 4/2000 (part time)
- Name and address of employer ICEHT-FORTH, Stadiou Str., Platani, Greece
  - Type of business or sector National Research Center
  - Occupation or position held Post doctoral fellow
- Main activities and responsibilities Participation in national research projects  
Characterization of porous materials using stochastic reconstruction techniques in conjunction with tomography and/or microscopy.  
Microscopic simulation of fluid flow in porous media

## **EDUCATION AND TRAINING**

- Dates (from – to) 7/1990-9/1994
- Name and type of organisation providing education and training Department of Chemical Engineering, State University of New York at Buffalo, Buffalo, NY, USA.
- Principal subjects/occupational skills covered Graduate student, PhD candidate, research assistant  
Research activities:

Development, characterization and applications of new porous materials for gas separations by adsorption.

Modeling and simulation of Pressure Swing Adsorption processes

PhD dissertation: " I. New materials and Applications for gas Separations by Adsorption. II. Effect of Different Transport Mechanisms and Multiplicity of Cyclic Steady States in Pressure Swing Adsorption." (academic advisor: Prof. R.T. Yang)

- Title of qualification awarded PhD in Chemical Engineering
- Dates (from – to) 9/1984-7/1989
- Name and type of organisation providing education and training Department of Chemical Engineering, University of Patras, Patras, Greece.
- Principal subjects/occupational skills covered Undergraduate studies in chemical engineering, diploma in chemical engineering  
Diploma thesis: Theoretical and experimental investigation of cross-flow microfiltration (academic advisor: Prof. A.C. Payatakes)
- Title of qualification awarded Diploma in Chemical Engineering

## RESEARCH AND TEACHING

### TEACHING

(UNDERGRADUATE AND GRADUATE COURSES)

#### Undergraduate/ Graduate Courses at AUTH, Department of Chemical Engineering

- Applied Thermodynamics I (undergr/compulsory, 2016-)
- Chemical Engineering Laboratory I (undergr/compulsory, 2016-)
- Mass Transport Phenomena (undergr/compulsory, 2017-)
- Computer Applications in Chemical Engineering (undergr/compulsory, 2014-2018)
- Chemical Product & Plant Design Project I, and II (undergr/compulsory, co-teaching)
- Modeling and Simulation of Molecular Systems (grad/elective, 2020-)

#### Undergraduate/ Graduate Courses at UOWM, Department of Mechanical Engineering

- Unit operations (2005-2015)
- Fluid Mechanics (2013-2015)
- Computational mechanics (2005-2015)
- Computational methods in unit operations (2006-2011)
- Hydrogen technologies (2004-2011)
- Physicochemical Processes in energy resources (2003-2004)
- Waste management and purification technologies in energy production units (2003-2004)
- General chemistry (2004)

#### Other Graduate-Training Courses:

- "Modeling of Material Structure: Pore/grain models and 3D reconstruction" in Nanostructured materials and membrane modelling and simulation, training course, FORTH/ICE-HT, Patras, Greece, June 18-27, 2008.
- "Digital reconstruction methods for the simulation of equilibrium and dynamic processes in porous media", 2<sup>nd</sup> International School and Workshop on INSitu study and DEvelopment of processes involving PORous Solids", Thessaloniki, Greece, Feb. 2007.
- Transport phenomena in porous media for environmental applications NCSR "Demokritos" (1998-1998).

#### Dissertation/Thesis Supervision

- 12 Ph.D. dissertations (6 completed).
- 37 Diploma theses (34 completed).

#### Completed PhD Disserations (Advisor):

1. Politis MG., "Multi-scale simulation of physicochemical process in hydrocarbon reservoirs and other porous media", Mech. Eng. Dept., UOWM, 17/2/2009.
2. Pagana A., "Development and evaluation of micro-mesoporous membranes for liquid waste treatment". Mech. Eng. Dept., UOWM, 20/5/2009.
3. Nikolic D., "Modeling, simulation and optimization of hybrid novel separation systems for energy saving", Mech. Eng. Dept., UOWM, 6/7/2010.
4. Ioannidou A., "Hydrogen storage methods using advanced materials", Mech. Eng. Dept., UOWM, 15/4/2011.
5. Bereketidou O., «Development, characterization and evaluation of novel catalytic systems for hydrogen production from bio-fuels", Mech. Eng. Dept., UOWM, 19/12/2011.
6. Kastrinaki G. " Synthesis and characterization of nano-structured porous materials for environmental and energy applications", Mech. Eng. Dept., UOWM, 1/4/2013.

### RESEARCH

(Research activities, projects etc.).

#### FUNDED INTERNATIONAL / NATIONAL RESEARCH PROGRAMS

1. " Development and Testing of Zeolite Membranes for Gas Separations". BRPR-CT96-0313 (NCSR "D", collaboration with Dr. N. Kanellopoulos) (1-11-96 , 31-10-99)
2. "Innovative Adsorption System and Process for Cost efficient Natural Gas Treatment".BRPR-CT98-0722 (NCSR "D", collaboration with Dr. N. Kanellopoulos) (1-9-98 , 31-8-2001)

3. "An Integrated Pore Space Reconstruction and Property Simulation Tool for Core Analysis and Reservoir Evaluation". OG/0032/96 (NCSR "D", collaboration with Dr. A.K. Stubos) (1-1-97 , 31-12-98)
4. "Heterogeneous and Damaged Core Analysis for Reservoir Evaluation". OG/0263/98 (NCSR "D") (1-1-99 , 31-12-2001)
5. "Stochastic reconstruction of porous materials and determination of their equilibrium and transport properties". PENED 99EΔ485 (NCSR "D" and CPERI/CERTH) (2000-2001)
6. "Development and Validation of an integrated numerical tool for scaling control and squeeze treatment optimisation". ENK6-CT-2000-00052 (1-1-2001 , 31-12-2003)
7. "Development of Ceramic Membranes For Olefin Recovery from Liquefied Petroleum Gases". GRD2-2000-30372 (CPERI/CERTH) (-2001-2004)
8. "Development of Environmentally Friendly Tracer Technology For Improved Reservoir Description" NNE5-2001-00422 (CPERI/CERTH) (-2002-2005)
9. "Development of hydrogen production technologies for fuel cell applications", ΕΠΑΝ-4.5.1 (Renewable Energy Resources) E22 α.π.12001/14-11-02 (CPERI/CERTH) (-2003 -2006)
10. "IN-Situ study and DEvelopment of processes involving nano-PORE Solids" Network of Excellence (CPERI/CERTH) (2004-2007)
11. "Towards knowledge-based processing systems", "PRISM", Marie Curie Action, MRTN-CT-2004-512233 (Aristotle University of Thessaloniki), (-2004-2008)
12. "Development and characterization of new bi-metallic materials for hydrogen storage applications", Greek-Slovenia research collaborative programs (collaboration with NCSR Demokritos).
13. "Novel Efficient Solid Stores for Hydrogen, Integrated Project IP-FP6 (collaboration with NCSR Demokritos) (-2006-2009).
14. "Industrial liquid waste treatment using nano-porous ceramic membranes", PENED, 03EΔ900, 2005-2008.
15. Development of hydrogen technologies an an alternative fuel for clean energy applications, OPAGK, Territory of Western Macedonia, (UOWM) 2006-2009.
16. "Development of Integrated Advanced Materials and Processes for Efficient Hydrogen Storage", "DIAMANTE", Marie Curie, Transfer of Knowledge, Contract number No: MTKI-CT-2005-029544, (UOWM) 2006-2010.
17. "Macropore Modeling Studies for Gas Separations", industrial contract sponsored by PRAXAIR inc. (USA), (CPERI/CERTH) (-2005-2007)
18. "Investigations of microscale mechanisms in the Gas Diffusion Layer (GDL) of PEM fuel cells", EPAN 4.3.6.1.d, E&T, Greece-USA collaborative research projects (UOWM) (2006-2007).
19. "Macropore Modeling Studies for Gas Separations-Phase II" industrial contract sponsored by PRAXAIR inc. (USA), (CPERI-CERTH) (2007-2009)
20. "Modeling Studies on Dense Membranes for Fuel Cell Applications" industrial contract sponsored by PRAXAIR inc. (USA), (CPERI-CERTH) (2010-2011).
21. "Design of membrane systems for CO<sub>2</sub> removal and capture from flue gases (CO<sub>2</sub> MembraneCapture)", National program "Synergasia", (UOWM) (2011-2014).
22. "Macropore Modeling Studies for Gas Separations-Phase III" industrial contract sponsored by PRAXAIR inc. (USA), (CPERI-CERTH) (2012-2013)
23. "Macropore Modeling Studies for Gas Separations-Phase IV" industrial contract sponsored by PRAXAIR inc. (USA), (CPERI-CERTH) (2014-2016)
24. Post Combustion Carbon Capture using MOFs: Materials and Process Development (MOFCCS), Ε.Π. ERA-NET (FENCO-NET) (CPERI/CERTH) (2014-2015)
25. Adsorbent Coatings / Structured Adsorbents for Improved Gas Separations, Phase V " industrial contract sponsored by PRAXAIR inc. (USA), (CPERI-CERTH) (2017-2018)
26. "Adsorbent Coatings/Structured Adsorbents for Improved Gas Separations, Phase V" industrial contract sponsored by PRAXAIR inc. (USA), (CPERI-CERTH) (2017-2018).
27. Development of Computer-Aided Tools for OPTimal Energy Consumption in Industrial Ceramics –CATOPEC-IC, GSRT (AUTH, collaboration with Prof. M.C. Georgiadis who is the scientific responsible for AUTH in the project) (2020-2023).
28. Biogas upgrade with simultaneous recycle and utilization of carbon dioxide for the optimal anaerobic treatment of waste-water, GSRT (AUTH, collaboration with Prof. A. Zouboulis who is the scientific responsible for AUTH in the project) (2020-2023).
29. "Integrated Membrane-Adsorption Processes for Efficient Carbon Capture", Hellenic Foundation for Research and Innovation-HFRI (CPERI/CERTH) (2020-2023).

### JOURNAL PUBLICATIONS

*(Title, authors, year, journal name, vol, pages).*

92 publications at peered reviewed journals (according to Web of Science/Scopus)  
See Annex for a detailed list

### CONFERENCE PROCEEDINGS

*(Title, authors, year, conference details, pages).*

90 proceedings at international and national conferences  
14 conference publications (peer reviewed). See Annex for a complete list

### OTHERS

*(Books, Patents etc).*

9 books chapters 1 granted US Patent, 1 European Patent Application and 13 articles appeared at special conference publications (with peer review)  
See Annex for a detailed list

## ADDITIONAL INFORMATION

### Total number of citations (1992-2021\*)

- Including self-citations: 2092 (Web of Science), 2295 (Scopus), 3413 (Google Scholar)
- Excluding self-citations: 1938 (Web of Science), 2115 (Scopus)

**h-index=26 (Web of Science), 28 (Scopus), 33 (Google Scholar)**

\*Up to 20/1/2021

**ORCID NUMBER:** [orcid.org/0000-0002-9149-7969](https://orcid.org/0000-0002-9149-7969)

## POPULAR SCIENTIFIC CONTRIBUTIONS

- Prime author of **one of the first publications** of **Pressure Swing Adsorption** for **CO<sub>2</sub> removal and concentration** from flue gases (Kikkinides E.S., Yang R.T and Cho S.H. "Concentration and Recovery of CO<sub>2</sub> from Flue Gas by Pressure Swing Adsorption". Ind. Eng. Chem. Res. 32, 2714, 1993). This is considered a **seminal work** in the field of **carbon capture by pressure swing adsorption** with 308 citations, according to Scopus (442 according to Google Scholar).
- Co-author of **pioneering work** of **adsorbent development** including **pillared clays** for gas separations and reaction engineering as well as **metal dispersed adsorbents** for **olefin-paraffin separations** using the  **$\pi$ -complexation** mechanism (Baksh M.S.A., Kikkinides E.S. and Yang R.T. "Characterisation by physisorption of a New Class of Microporous Adsorbents : Pillared Clays", Ind. Eng. Chem. Res., 31, 2181, 1992; Yang R.T. and Kikkinides E.S., "New Sorbents for Olefin Paraffin Separations by Adsorption via  $\pi$ -complexation". AIChE Journal, 41(3), 509, 1995).
- **Co-inventor** of a **granted US Patent**, with PRAXAIR Inc., on the **development of adsorbent materials** for gas separations by adsorption, **combining microscopic structural characterization** and **stochastic simulation** methods with **macroscopic experiments** and **process modeling** and **simulation** (M.W. Ackley, P.A. Barret, N.A. Stephenson, E.S. Kikkinides, "High Rate Compositions", United States Patent and Trademark Office Granted Patent, US 9533280, 2017). Co-inventor of a related European Patent Application, with PRAXAIR Inc. (M.W. Ackley, P.A. Barret, N.A. Stephenson, E.S. Kikkinides, "Compositions Useful in Adsorption and Reactive Processes", EP2864039 (2015).
- Co-author and **principal investigator** of several publications and **research projects** that aim in the development of **modeling** and **optimization frameworks** for **unit operation processes**, including Pressure/Vacuum Swing Adsorption (P/VSA) for carbon capture, and hydrogen recovery from different industrial processes, H<sub>2</sub> storage using porous materials or metal hydrides, development of multi-bed P/VSA units and hybrid P/VSA-membrane configurations from improved process performance.

## AWARDS

- Scholarships from the National Foundation of Scholarships (1985 - 1989).
- Scholarships from the Department of Chemical Engineering SUNY, at Buffalo (7/90 - 9/94).
- Biographic profile selected by Marquis Who's Who in Science and Engineering (2002).
- Biographic profile selected by Marquis Who's Who in the World 19<sup>th</sup> edition (2002).
- Biographic profile selected by the International Biographical Center (Cambridge) in the following edition: "2000 eminent Scientists of Today - First Edition".
- Best poster award in the first national conference in hydrogen technologies: Research-Development-Applications, Athens, 30/9-2/10, 2004 (S.S. Makridis et al.)
- Biographic profile selected by Marquis Who's Who in Science and Engineering (2006).
- Best poster award in the 10th National Conference in Chemical Engineering, Athens, 2019 (Karageorgos F., Kikkinides, E.S. and Kyprisides C., "Mathematical modeling of delivery of bio-molecules to the brain through the formation of hydrogels in the nasal area")

### **Member in Organizing/Scientific Committees for National and International Conferences/Workshops**

- 2nd National Conference in Hydrogen Technologies (Thessaloniki, 2005)
- 2nd National Symposium in Porous Materials (Athens, 2005).
- 6th European Conference in Chemical Engineering (Copenhagen, 2007).
- 3rd National Symposium in Porous Materials (Thessaloniki, 2007).
- 4th National Symposium in Porous Materials (Patras, 2009).
- 5th National Symposium in Porous Materials (Heraklion, 2011).
- 6th National Symposium in Porous Materials (Kavala, 2013).
- 7th National Symposium in Porous Materials (Ioannina, 2016).
- 10th National Conference in Chemical Engineering (Patras, 2015).
- 11th National Conference in Chemical Engineering (Thessaloniki, 2017).

### **Reviewer in scientific journals**

AIChE J., Chemical Engineering Science, Industrial and Engineering Chemistry and Research, Journal of Colloid & Interface Science, Journal of Membrane Science, Colloids and Surfaces A, Powder Technology, Computers & Chemical Engineering, International Journal of Hydrogen Energy, Drying Technology, Physical Review E., Adsorption, J. Chemical & Engineering Data.

### **Evaluator of Proposals (on behalf of the Greek general secretariat for research-GSRT)**

### **Evaluator of Proposals on behalf of the Hellenic Foundation for Research and Innovation-HFRI**

### **Invited Talks**

1. "Theoretical and Experimental Studies on the Flow of Condensable Vapours through Mesoporous Media". State University of New York at Buffalo, USA, 10/6/97.
2. "Simulation of Physicochemical processes in porous materials with application in gas separations". Dept of Chemistry, National University of Athens, 16/3/99.
3. "Simulation of Transport Phenomena in Porous media". Laboratory of Materials modeling NCSR "Demokritos" ,25/4/99.
4. "Simulation of Physicochemical processes in porous materials", CPERI/CERTH, 8/10/2000.
5. "Stochastic simulation of structure and physicochemical properties of porous materials", CPERI/CERTH, 15/1/2003.
6. "Selected topics on multi-scale simulations in porous membranes". 9<sup>th</sup> Network Young Membranes Meeting, 28/9/2007, Thessaloniki, Greece.
7. "Micro-structure representations for the Simulation of Physicochemical Processes in Porous Media", Praxair Inc., Tonawanda, NY, USA, 4/2/2008.
8. "The effect of microstructure on the macroscopic properties of porous ceramic materials". Symposium on ceramic materials organized by the Greek Ceramic Society, Thermi, 18/5/2010.
9. "The effect of microstructure on the macroscopic transport properties of porous materials". Symposium in memory of A.C. Payatakes, Patras, 17/12/2010.
10. "Hydrogen as an alternative energy carrier: Technological challenges and public awareness". Regional Discussion Forum of European Citizens: Energy and Environment, Legislative and political priorities of the E.C., Kozani, 21/1/2011.
11. Multiscale Modelling and Simulation of Adsorption-based Processes for Gas Separations and Purifications, Department of Chemical Engineering, University of Massachusetts, Amherst, MA, USA, 29/6/2017.

### **SOCIETY MEMBERSHIPS**

**American Institute of Chemical Engineers (1990-1994)**

**Controlled Release Society, local chapter (1997-2004)**

**International Adsorption Society (1998, 2015, 2020)**

**Material Research Society, MRS (2003)**

**Hellenic InterPore (International Society for Porous Media,) National Chapter (HINC).**

**Founding Member (2020-)**



## ANNEX-Detailed Lists of Scientific Published Work

### Publications at International Journals (according to Web of Science/Scopus)

- 1) **Kikkinides E.S.** and Yang R.T. "Simultaneous SO<sub>2</sub>/NO<sub>x</sub> removal and SO<sub>2</sub> Recovery from Flue Gas by Pressure Swing Adsorption". *Ind. Eng. Chem. Res.* **30**, 1981 (1991).
- 2) **Kikkinides E.S.**, Ritter J.A. and Yang R.T. "Pressure Swing Adsorption for Simultaneous Purification and Sorbate Recovery". *Chin. J. Chem. Eng.* **22** (1991).
- 3) Baksh M.S.A., **Kikkinides E.S.** and Yang R.T. "Characterisation by physisorption of a New Class of Microporous Adsorbents : Pillared Clays". *Ind Eng. Chem. Res.*, **31**, 2181 (1992).
- 4) Baksh M.S.A., **Kikkinides E.S.** and Yang R.T. "Lithium type X Zeolite as a Superior Sorbent for Air Separations". *Sep.Sci.Technol.*, **27**(3), 277 (1992).
- 5) Yang R.T., Chen J.P., **Kikkinides E.S.** and Cheng L.S., "Pillared Clays as Superior Catalysts for Selective Catalytic Reduction of NO with NH<sub>3</sub>". *Ind. Eng Chem. Res.*, **31**, 1440, (1992).
- 6) **Kikkinides E.S.** and Yang R.T. "Further work on Approximations for Intraparticle Diffusion Rates in Cyclic Adsorption and Desorption". *Chem Eng Sci.* **46**(6), 1169 (1993).
- 7) **Kikkinides E.S.** and Yang R.T. "Effects of Bed Pressure Drop on Isothermal and Adiabatic Adsorber Dynamics". *Chem. Eng. Sci.* **48**(9), 1545 (1993).
- 8) **Kikkinides E.S.** and Yang R.T. "Gas Separation and Purification by Polymeric Adsorbents. Flue Gas Desulfurization and SO<sub>2</sub> Recovery by Styrenic Polymers". *Ind. Eng. Chem. Res.* **32**, 2365 (1993).
- 9) **Kikkinides E.S.**, Yang R.T and Cho S.H. "Concentration and Recovery of CO<sub>2</sub> from Flue Gas by Pressure Swing Adsorption". *Ind. Eng. Chem. Res.* **32**, 2714 (1993).
- 10) **Kikkinides E.S.**, Yang R.T and Cho S.H. "Response to comments on Concentration and Recovery of CO<sub>2</sub> from Flue Gas by Pressure Swing Adsorption". *Ind. Eng. Chem. Res.* **33**, 2881 (1994).
- 11) **Kikkinides E.S.** Sikavitsas V. and Yang R.T. "Natural Gas Desulfurization and H<sub>2</sub>S Recovery by Pressure Swing Adsorption. Feasibility Study and Multiplicity of Cyclic Steady States". *Ind. Eng. Chem. Res.* **34**, 255 (1995).
- 12) Yang R.T. and **Kikkinides E.S.**, "New Sorbents for Olefin Paraffin Separations by Adsorption via  $\pi$ -complexation". *AIChE Journal*, **41**(3), 509 (1995).
- 13) **Kikkinides E.S.**, Tzevelekos K.P., Stubos A.K., Kainourgiakis M.E. and Kanellopoulos N.K. "Application of Effective Medium Approximation for the Determination of the Permeability of Condensable Vapours Through Mesoporous Media." *Chem. Eng. Sci.* **52**(16) 2837 (1997).
- 14) **Kikkinides E.S.**, Charalambopoulou G.C., Varelas C.G., Stubos A.K. Kanellopoulos N.K. and Steiner C. "A two-phase flow model for controlled drug-release from biphasic polymer hydrogels." *J. Of Controlled Rel.*, **51**, 313 (1998).
- 15) Tzevelekos K.P, **Kikkinides E.S.**, Stubos A.K., Kainourgiakis M.E. and Kanellopoulos N.K. "On the Possibility of Characterizing Mesoporous Materials by Permeability Measurements of Condensable Vapours. Theory and Experiments". *Advances in Colloid and Interface Sci.*, **76-77**, 373 (1998).
- 16) Kainourgiakis M.E., **Kikkinides E.S.**, Stubos A.K. and Kanellopoulos N.K. "Adsorption-Desorption Gas Relative Permeability through Mesoporous Media. Network Modeling and Percolation Theory" *Chem. Eng. Sci.*, **53**(13) 2353 (1998).
- 17) **Kikkinides E.S.**, Stubos A.K., Tzevelekos K.P, Mitropoulos N. and Kanellopoulos N.K., "Ceramic Membranes-Characterization and Applications" *STUD. SURF. SCI. CATAL.*, **120A**, 687 (1999).
- 18) Tzevelekos K.P., Romanos G.E., **Kikkinides E.S.**, Kanellopoulos N.K. and Kaselouri V. "Experimental Investigation on Separations of Condensable from Non-Condensable Vapors Using Mesoporous Membranes." *J. of Microporous and Mesoporous Mat.* , **31**, 151 (1999).
- 19) **Kikkinides E.S.** and Burganos V.N. "Structural and Flow Properties of Binary Media Generated by Fractional Brownian Motion Models." *Physical Review E*, **59**(6) 7185 (1999).
- 20) Kainourgiakis M.E., **Kikkinides E.S.**, Stubos A.K. and Kanellopoulos N.K. "Simulation of Self Diffusion of Point-like and Finite-size Tracers in Stochastically Reconstructed Vycor Porous Glasses" *J. Chem. Phys.*, **111**(6) 2735 (1999).
- 21) Tzevelekos K.P., **Kikkinides E.S.**, Kainourgiakis M.E., Stubos A.K., Kanellopoulos N.K. and Kaselouri V. "Adsorption-Desorption Condensable Vapor Permeability through Mesoporous Media. Network Modeling and Percolation Theory" *J. Colloid Interf. Sci.*, **223**, 89 (2000).
- 22) **Kikkinides E.S.**, Kainourgiakis M.E., Stefanopoulos K., Mitropoulos A.Ch., Stubos A.K. and Kanellopoulos N.K. "Combination of Small Angle Scattering and 3-D Stochastic Reconstruction for the Study of Adsorption-Desorption Processes in Vycor Porous Glass" *J. Chem. Phys.*, **112**(22), 9881 (2000).
- 23) Charalambopoulou G.Ch., **Kikkinides E.S.**, Stubos A.K., Varelas C.G. and Papaioannou A., "Modeling Sustained Drug Release from Biphasic Polymer Hydrogels" , *J. Contr. Rel.*, **64**, S338-339 (2000).
- 24) Zouridakis N.M., Economou I.G., Tzevelekos K.P., and **Kikkinides E.S.**, " Investigation of the Physicochemical Characteristics of Ancient Mortars by Static and Dynamic Studies" *Cement and Concrete Research*, **30**(7), 1151 (2000).
- 25) M.E. Kainourgiakis, **E.S. Kikkinides**, Th.A. Steriotis, A.K. Stubos, K.P. Tzevelekos, and N.K. Kanellopoulos, "Structural and Transport Properties of Alumina Porous Membranes from Process-Based and Statistical Reconstruction Techniques", *J. Colloid Interf. Sci.*, **231**,157 (2000).
- 26) G.Ch. Charalambopoulou, P. Karamertzanis, **E.S. Kikkinides**, A.K. Stubos, N.K. Kanellopoulos, A.Th. Papaioannou, "A Study on Structural and Diffusion Properties of Porcine Stratum Corneum based on Very Small Angle Neutron Scattering Data", *Pharmaceutical Research*, **17**(9) 1085 (2000).

- 27) **Kikkinides E.S.** and Burganos V.N. "Permeation properties of three-dimensional self-affine reconstructions of porous materials", *Physical Review E*, 62(5) 6906 (2000).
- 28) **Kikkinides E.S.**, Steriotis Th., Stubos A.K., Stefanopoulos K., Mitropoulos N. and Kanellopoulos N.K., "Structural Characterization and Applications of Ceramic Membranes for Gas Separations" Characterisation of Porous Solids (COPS V), *STUD. SURF. SCI. CATAL.*, 128: 429 (2000)
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